Re: Is continuum completely filled up?

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- *Date*: Sat, 13 Jan 2007 19:04:18 +0900

"Eckard Blumschein" <blumschein@xxxxxxxxxxxxxxxxxxx> wrote in message news:45A76E7D.7080908@xxxxxxxxxxxxxxxxxxxxxx

> On 1/4/2007 1:53 PM, Albrecht wrote:
>
>> On 27 Dez. 2006, 03:19, "ooo" <fara...@xxxxxxxxx> wrote:
>>
>>> I am biginer in English and mathrmatics.
>>> If real line is filled with points and each point is
>>> distinguished,then each point has difference from every other
>>> points.
>>> Therfore real line has void.
>
> In order to make sure that I understood ooo correctly I will try and "translate" it into what I believe to read:
>
>>> If real line is filled with points and each point is
>>> distinguished from the other ones, then each point has
>>> to be separated by a difference from every other point.
>>> Therfore the piece of real line in between has to be void.
>>
>> What means: "something is filled with points"?
>> I see two possibilities concerning the relation of /totality of real numbers/ <−> /totality of points on a straight line/:
>
> In the subject, ooo got more specific: "completely filled" not just sufficiently. "Sufficiently" was used by Fraenkel in 1923.
>
> In so far, Albrecht is justified when he refers to totalities. However, the line cannot be resolved into single points, and a continuum of real numbers cannot be resolved either.

> 1) The straight line is build up out of points
>
> 2) We can found points on the straight line but it isn't build up out of them
>
> The 1) leads to the paradoxon that points don't have extent but the straight line have. So there arise the question how points are able to build up extent without having extent by themself.

The required qualitative step corresponds to fictitious transition from the realm of single points and discrete (rational) numbers to continuous mere potentialities of location and real numbers.

> The next question
> arise how there could be different extents as lines of different length but all are build up of the same "amount" of points.

I see such misconceptions related to Cantorian naivity. Refer to Galilei's clarity, instead: There is no amount of elements inside any piece of continuum.

With 1) math is unable to explain expansion, extent and measure.

Only as long as it follows Dedekind, Cantor, and other trolls.

> 2) is consistent to our experience that we can found as many points on a line as we want. But than we must consider that lines consist of lines, and nothing more. Points are properties of lines but not parts. Infinitely many points denotes the incapability to have them all. In this view there is no actual infinity.

Be not stupoid, follow Leibniz. Accept infinity and the reals like valuable fictions. Calculate as if they were rationals if admissible.

> The set theory is based on the view 1).

No. Even worse, set theory is based on schizophrenia in re. Cantor's definition of a set claimed to allow both options at a time.

> Therefore its torso has beem mumified into ZFC axioms.
>
> Eckard Blumschein

When I saw your massage for the first time .I was surprised for likeness of our idea . And , the more I see your idea ,the more I was confident of .
But , I couldn't join in your thread , because of lack of my English ability ..
And I had no experience of posting .
When I posted here for the first time , I was upset having had unexpected reply . And my posting stopped .
After that ,I learned that W.Mueckenheim had a piece of papers about what I wanted to assert .
My idea is based on the same view as these two idea .
But it has some difficulty to apply these idea as it is to mathematics .
As you admit the usefullness of irrational number in geometry ,
I have been thinking how to make useful our idea for mathematics .
Geometrical points is projected on the coordinate . We must make these points compatible with our phylosophy to incorporate them consistent mathematical theory .
The one way is to use only rationals , because irrationals are approximated to rationals in any detail .
The other way is to adopt computable numbers .
Both way have problems at present .
Spherical surface is covered with uncountable number of points ,and most of them are unspecifiable .
But we can calculate the position of points in numerical value in any detail .. Only these are things avairable for us .
If you find any rudness in my massage , please pardon me .
Oppositions against my idea are support for me . I will correct my idea .
Thanks for reading my massage .

Regards
Ozaki Toshiaki

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